Docket No.: MOD3216P0291US

## IN THE CLAIMS

1. (Currently Amended) A catalyst for the full oxidation of volatile organic compounds (VOC) and of CO to CO<sub>2</sub>, comprising:

a non-stoichiometric crystalline compound conventionally designated by a formula which corresponds to  $A_{14}Cu_{24}O_{41}$  (I), where A is Sr or a solid solution of Sr with alkaline-earth metals, alkaline metals or lanthanides; or a non-stoichiometric crystalline compound conventionally designated by a formula which corresponds to  $B_4Cu_5O_{10}$  (II), where B is Ca or a solid solution of Ca with alkaline-earth metals, alkaline metals or lanthanides; or mixtures thereof; that is prepared in a form which has a large specific surface area, preferably larger than 25 m<sup>2</sup>/g.

- 2. (Original) The catalyst according to claim 1, further comprising a substrate material.
- 3. (Original) The catalyst according to claim 2, wherein the substrate material is a porous inert material.
- 4. (Currently Amended) The catalyst according to claim 3, wherein said porous inert substrate comprises a material chosen from the group consisting of A1<sub>2</sub>O<sub>3</sub>, ZrO<sub>2</sub>, CeO<sub>2</sub>, TiO<sub>2</sub>, and MgO.
  - 5. (Original) The catalyst according to claim 1, in form of granules.
- 6. (Original) The catalyst according to claim 2, wherein said substrate is an inert substrate in the form of a thin film.
- 7. (Original) The catalyst according to claim 2, wherein said substrate is a composite material.
- 8. (Currently Amended) The catalyst according to claim 1, comprising 5% to 20% by weight of a non-stoichiometric crystalline compound conventionally designated by a formula which corresponds to A<sub>14</sub>Cu<sub>24</sub>O<sub>41</sub> (I), where A is Sr or a solid solution of Sr with alkaline-earth metals, alkaline metals or lanthanides; or a non-stoichiometric crystalline compound conventionally designated by a formula which corresponds to B<sub>4</sub>Cu<sub>5</sub>O<sub>10</sub> (II),

where B is Ca or a solid solution of Ca with alkaline-earth metals, alkaline metals or lanthanides; or mixtures thereof.

- 9. (Cancelled)
- 10. (Cancelled)
- 11. (Currently Amended) A method for preparing a catalyst comprising a non-stoichiometric crystalline compound conventionally designated by a formula which corresponds to Sr<sub>14</sub>Cu<sub>24</sub>O<sub>41</sub> comprising the steps of:
- a) immersing a pre-dried granular porous substrate material in an aqueous solution with a molar concentration of Sr(NO<sub>3</sub>)<sub>2</sub> from 0.23 M to 0.93 M and a molar concentration of Cu(NO<sub>3</sub>)<sub>2</sub> from 0.39 M to 1.59 M;
  - b) drying the product of step a) at a temperature from 80°C to 120°C; and
- c) holding the product of step b) at a temperature from 650°C to 750°C in a gas stream which contains oxygen until complete decomposition of the nitrates occurs.
- 12. (Currently Amended) A method for preparing a catalyst comprising a non-stoichiometric crystalline compound conventionally designated by a formula which corresponds to Ca<sub>4</sub>Cu<sub>5</sub>O<sub>10</sub> comprising the steps of:
- a) immersing a pre-dried granular porous substrate material in an aqueous solution of Ca(NO<sub>3</sub>)<sub>2</sub> and Cu(NO<sub>3</sub>)<sub>2</sub> in an equimolar ratio and at a molar concentration from 0.39 M to 1.39 M;
  - b) drying the product of step a) at a temperature from 80°C to 120°C; and
- c) holding the product of step b) at a temperature from 650°C to 750°C in a gas stream which contains oxygen until complete decomposition of the nitrates occurs.
- 13. (Original) A method for preparing a catalyst comprising a non-stoichiometric crystalline compound conventionally designated by a formula which corresponds to Ca<sub>4</sub>Cu<sub>5</sub>O<sub>10</sub>, comprising the steps of:
  - a) immersing a pre-dried granular porous substrate material in an aqueous solution

obtained by dissolving, with the application of heat, CuO and CaCO<sub>3</sub> in nitric acid, so that the molar ratio between the components of the solution is CuO:  $CaCO_3$ :  $HNO_3 = 1:0.83:$  3.2; water and citric acid being added thereto so that the citric acid: Cu molar ratio is from 3.5:1 to 4.0:1;

- b) heating the product of step a) in air until combustion of the organic fraction of the absorbed material is achieved; and
- c) thermal treating the product of step b) for 4 to 24 hours at a temperature from 650 to 750°C in a stream of gas containing oxygen.
- 14. (Currently Amended) The method according to claim 11, wherein the porous material is selected from the group consisting of A1<sub>2</sub>O<sub>3</sub>, ZrO<sub>2</sub>, CeO<sub>2</sub>, TiO<sub>2</sub>, and MgO.